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			Number: LS-PPS-0022 Effective:	Revision: B Page 1 of 6			
			Revision/Periodic   Passed   Passed   Passed   Full   Finish Time:  one.  ready state  ity control  conds  ound is  oom is on.  ring   Commission out.				
	logical Interlock Test			B Page 1 of 6  n/Periodic Review Log			
Prepared/ M. Buckley Approved By:	Approved By: S.Buda	ı					
*Approval signatures on file with maste	er copy.						
		1	Revision	Periodic Review Log			
Test Reason:		Test Result:	□ Passed	Page 1 of 6  Page 1 of 6  prion/Periodic Review Log Description   Partial			
		Test Type:	□ Full	☐ Partial			
Test Date:		Start Time:	Finish	Time:			
Tester 1:		Assistant 1:	·	Page 1 of 6    Page 1 of 6			
Tester 2:		Assistant 2:		Page 1 of 6  Page 1 of 6  Don/Periodic Review Log  Failed  Partial			
PREPARATION:							
	Operator that a VIIV Interloc	ek test will be d	one				
	*		0110.				
		•	ready state				
			10uu ja aluut				
The person inside water	ches the VUV ring Secure 'A'	indicator.					
	The indicator lights afte	er the warning se	ound is				
		: 4141					
	red/ M. Buckley ved By: al signatures on file with master copy.  Reason:  Date: ar 1: ar 2:  ARATION: Inform Control Room Operator that a VUV Inter LOTO the LEBT valve and LINAC low level RF Verify VUV main power supplies and LINAC m where they can be turned ON.  Search the VUV ring with one person remaining rack. The person outside times the audible alarm Audible alarm sounds.  The person inside watches the VUV ring Secure The indicator lights a complete The Area Secured lig The five beacons surn are flashing.  Open the entry gate.  Observe the Ring Sec The indicator on CS-I The five beacons surn go out. The Area Secured lig An alarm is reported panel/micro.  Close the gate.						
		inding the $\mathbf{v} \cup \mathbf{v}$	ring	Revision/Periodic Review Log    Passed			
2. Open the entry gate.							
	Observe the Ring Secur	e 'A' & 'B' indic	cators go out	☐ Failed☐ Partial			
	The indicator on CS-E g	goes out					
	The five beacons surrou	inding the ring					
	•						
	The Area Secured light						
	An alarm is reported to panel/micro.	the control roor	n alarm				
Close the gate.							
3. Press CS-E (Check sta	tion at exit).						
	Pilot on CS-E does not co	me on					

			VUV Ring	<u> Radiolo</u>	gical Interl	ock Test				
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4	Daga	~ CQ 2 CQ 2 CQ 4	and CC E							
4.	Pres	s CS-2, CS-3, CS-4		t liabt ata						
	Ona	n the cate and then a	Neither pilo	_	iys on					-
	_	n the gate and then c s in order CS-4, CS-	_		2					
	ries	s in order C5-4, C5-	-3, CS-2, CS- Interlock do							
	Ona	n the gate and then c			uvaic.					-
	Ope	ii the gate and then c	nose the gate	•						
5.	Pres	s CS-1 and start time	ing,							
				_	ot lights turr	n off in less t	han 2 min			
	Pres	s in order CS-2, CS-								
			Pilot on CS							
			Ring interlo	ck does n	not activate.					
6.	Test	the following emerg	gency stop sv	vitches or	ne at a time b	pelow.				
		- Emergency Stop o								
		- Emergency Stop o								
		- Emergency Stop o		`	,	•. •	LDIAG	/D .	1 7 77 77	
	ES4	- Emergency Stop is	n control roo	m. <u>Note</u> :	ES4 will dr	op security i				_
	Drog	a an amarganay stan					ES 1	ES2	ES3	ES4
	ries	s an emergency stop	ES pilot 'A'	in securit	ty rack goes	out				
			ES pilot 'B'							
			Emergency							
			Emergency	•		•				-
	Rese	et emergency stop	Lineigency	Stop Late	on D marca	ioi goes out				-
	1000	et emergency stop	ES pilot 'A'	in securit	ty rack come	ON				
			ES pilot 'B'		-					-
			Emergency							
			out	Stop Late	on marca	tor remains				
			Emergency	Stop Late	ch 'B' indica	tor remains				
	Pres	s the reset switch on		rack						-
			Emergency ON.	Stop Late	ch 'A' indica	tor comes				
			Emergency ON.	Stop Late	ch 'B' indica	tor comes				
										-
7.	Rots	ate the lockout switch	h to OFF and	attemnt	to secure the	VIIV rino				
, .	1.01	ace the lockout switch	Observe the	-		_				
	Rots	ate the lockout switch		_	. 1101 BCC G1C.	•				
			·- ·- · · · · · · · · · · · · · · ·							

			VUV Ring F	Radiological	Interloc	k Test				
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8.	VUV	re VUV ring, with s injection shutter and es on. Listen to and	d verify that In time injection Alarm s And rep	njection Shut	ter Open n. least 3 - 0 - 13 sec	light in control  5 seconds  conds				
9.	Atte	mpt to Enable the M		for the VUV e that the shu	_	not enable.				
10		off Lockout switch	Injectio out. The Inje ON.	n Shutter Op		in control roo				
11.	Secu modu Turn Adju settir	ON modulators where the VUV ring and alators to observe the on Dipole and set to st the A limit of the ng.	I the LINAC Be status of the conjection level dipole current  The injection The Dipole Conference of the modulato the injection services and the injection services are status of the modulato the injection services are status of the modulato the injection services are status of the injection services are st	ooster. Have A & B chains el. Open the sensor to 2 d shutter closes urrent in Ran rs Chain A d hutter closes	a persons. Injection igits greas. s. ge light arops out	shutter. ater than the p	present	Set orig.	Chain New Chain point	
12.	digit	n the Injection shutte s greater than the pre rn the B limit switch	esent setting. The modulato until the injection	rs Chains 'A' tion shutter c	& 'B' dro	op out mome		Orig.	New	
13.		n the injection shutte ace the dipole curren			Start_ Start_ er closes		End ts End			MeV Counts
14.	_	n the Injection shutte y shutter.	or and manually Observe the in The modulato the injection s	njection shutt rs Chain A d	er closes					

			VUV Ring	Radiolog	ical Interl	ock Test	
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15.	Ope	n the injection shu	-	_			
			Observe the				
						entarily drop out	until
			the injection			VUV for 5 seco	 nde
			when the ga				iius
						Control Room	-
							-
]	Re-s	secure the VUV rin	ıg.				
		tch to Access Mod	e with the cont	rol room s	witch. Pre	ss Entry Permit b	outton
1	ın co	ontrol room.	I a als mala		سمنه اسم ما		
	O a	the costs	Lock rele	ases on ga	te and sign	changes to green	·
'	Ope.	n the gate.	VIIV inte	rlock does	not dump.		
	Clos	se gate, release per		TIOCK GOES	not dump.		
•	Cios	se gate, release pen	Gate is lo	cked			
	One	n gate by releasing					-
	Op <b>c</b>	in gate by releasing		rlock dum	ns		
			, , , , , ,		r~		-
17.	Re-s	secure the VUV rin	g. While in A	ccess Mod	e and inject	ion shutter enabl	e state
	(i.e.	dipole current in ra					
				•	shutter does	-	
(	Ope	n the injection shu		-	_		
						chain drops out v	vhile
			the injecti	ion shutter	is open.		
18.	Swit	tch from Access m	ode to Normal				
	~				warning so	unds in the VUV	area
				15 seconds			
19.	Brea	ak security using th					
				hat there is	s no audible	e warning in the '	√UV
			ring. Pilot Ligh	nt on CSE	roes out		-
			•	rlock drop	-		-
			VOV IIILE	riock drop	s out		
	Sear	ch VUV ring					
		ak security using th	e Interlock Of	f button or	VUV Seci	ırity Rack	
•						e warning in the	VUV
			ring.			<i>5</i>	
			_	nt on CSE	-		·
			VUV inte	rlock drop	s out		

		1	VUV R	ing Rac	liologi	cal Inte	rlock T	'est				
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(	Place holders on popen the injection Remove the B sw	n shutter a	and turner. Obse The mountil the The 'B'	on VU erve the odulator ie inject Chain	V pow follow rs 'A' & ion shu trips fin ' Ring	rer supp ing: c 'B' cha utter clo rst Secure '	in drops ses. A' indic B' indic	_	mentarily s ON.			
							rowe	a Supply			SEXT	SEXT
J	Dipole trips off Remaining power		ipole	Q1	Q2	Q3	Q4	Q5	Q6	Q7	F	D
1	supplies stay ON indicator shows to	rip on										
l t	Dipole No Indicator shov rip on remaining	_										
	supplies	aldan										
	Replace switch he Use the B Test ke		to rese	t the B	chain							
·	ose the B Test he	) (I 300)		e the B		light is	on.					
21. (	Open the injection Remove the A		older. Mod injec The	ulators tion shu 'A' Chai VUV R	'A' & 'I atter clo in trips ing Sec	B' chain oses. first cure 'A'	drops o	out mome or goes or or stays O	entarily u ut.	until the		<u></u>
1	Power Supply	Turns (	Off	Indic show	ator s trip							
	Dipole											
	Q1											
	Q2											
	Q3											
	Q4											
	Q5											
	Q6											
	Q7											
	Sext F											
S	Sext D											

Replace Switch A Holder

		VUV Ring	Radio	ological Interloc	k Test		Ī
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	cure the VUV Ring. Irn ON RF Systems 1 &	Observe	e that F	•	a minimum of 75	RF1	RF
	ess the Interlock Off bu ritch "clicks" when mal						
	emove the "Magnet Test	The Ma Normal V ring	gnet T to Tes	est Mode indicate	C	_	
Th Re 25. In no Re Inf	the five beacons that sur- the Do Not Enter sign at eplace the "Magnet Tes control room, set shutt rmal. Emove red tag from the form the control room of operations shift log and	the gate is of the Mode Key'er command Linac low looperator that	on. " and to " to " clo evel R1 test is	urn to normal posose" and return action to the second seco	ecess switch to		

\* \* \*

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